

Documentation for Thermodynamic Graphics

This package is designed to draw thermodynamic diagrams using vcs

There is NO real documentation except for this little file and the test code distributed.

Modification/enhancement to the code are welcomed and should be addressed to:

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Request for improvements/changes are welcome to but are less likely to be answered ;)

Initialisation

```
th=thermo.Gth(vcs_object,name)
```

Predefined types of thermodynamic diagram

```
th.type='emagram'
```

```
th.type='tephigram'
```

```
th.type='stuve'
```

```
th.type='skewT' (default)
```

user defined type is also allowed (th.type='custom', see bellow for more details)

You can control skewness (default is -35)

Thermodiagrams component (background are:)

isotherms, isothermsfilled, isobars, dryadiabats, pseudoadiabats

They are all VCS isoline(/fill) method and can be redefined by the user, giving full control of the plot aspect

the datawc of the plot represent corner point of the plot:

```
## Temperatures at the bottom of the grap (in C)
```

```
th.datawc_x1=-50.
```

```
th.datawc_x2=50.
```

```
## Pressure at bottom and top of page (in hPa)
```

```
th.datawc_y1=1050.
```

```
th.datawc_y2=100.
```

```
## PLOtting windbarbs is also possible and the windbarbs scale can be controlled with:
```

```
th.windbarbsscales=[5,2,1]
```



total length is 1

barbs angle is 60 degrees

barb depth is .1

CUSTOM Diagrams

You'll need to redefine the following functions

TP2XY and XY2TP

th.TP2XY=myTP2XY_func

TP2XY: Converts Temperature and pressure to X/Y Coord

XY2TP does the backward operation

Arguments to the functions are:

```
def myTP(self,T,P):
```

```
...
```

```
return X,Y
```

TO DO: CAPE Computation